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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,056	05/01/2001	Mark J. Takatz	2479.2068-000 (TAN00-58)	4567
21005	7590	07/13/2004	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			WANG, TED M	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 07/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

5

Office Action Summary

Application No.

09/847,056

Applicant(s)

TAKATZ ET AL.

Examiner

Ted M Wang

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-16 are pending in the application.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: *references 10 in Fig. 1 and 184 in Fig. 5C*. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show *reference 181 in Fig. 5C* as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of

Art Unit: 2634

an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because *wrong reference 208 has been assigned for CREST in Fig. 5. "208" (CREST) should be changed to "205" in Fig.5C.* A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Preliminary Amendment

5. The preliminary amendment filed on 8/6/2001 has been entered.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 7, 8, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- In regard claims 7 and 15, "the wideband variance value is determined from components of the received RF signal across a bandwidth which is at least twice as wide as a bandwidth of the intended received signal" in lines 1-3 as recited, has not been taught in the specification. The specification only teaches that the present invention is an architecture for an Automatic Gain Control (AGC) circuit as used in a digital receiver that utilizes a main loop filter that is of a relatively wide bandwidth (page 3 lines 11-13).
- In regard claims 8 and 16, "the narrowband variance value is determined from components of the received RF signal across a bandwidth which is less than twice a bandwidth of the intended received signal" in lines 1-3 as recited, has not been taught in the specification. The specification only teaches that the present invention is an architecture for an Automatic Gain Control (AGC) circuit as used in a digital receiver that utilizes a main loop filter that is of a relatively wide bandwidth (page 3 lines 11-13).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6, and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurihara (US6,731,703) in view of Takagi (US6,556,636A).

In regard claim 1, Kurihara discloses a power level calculating circuit and receiver comprising the step of coupling a received radio frequency (RF) signal to a variable gain receiver amplifier, the variable gain receiver amplifier having a gain control input, to produce a gain controlled RIF signal (Fig.1 element 3 and column 6 lines 1-67);

digitizing the gain controlled RF signal to produce a received digital signal (Fig.1 element 5 and column 6 lines 1-67);

determining a wideband variance value from the received digital signal (Fig.1 element 10 and column 6 lines 1-67);

determining a narrowband variance value from the received digital signal (Fig.1 element 11 and column 6 lines 1-67) except specifically teaching that and if the narrowband variance value is less than the wideband variance value, using the

Art Unit: 2634

narrowband variance value to set the gain control input on the gain controlled receiver.

Takagi discloses a digital communication apparatus having level controller with a disturbance detection unit that if the narrowband variance value is less than the wideband variance value, using the narrowband variance value to set the gain control input on the gain controlled receiver (Fig.1 element 51 and column 5 line 60 – column 6 line 65) in order to detect the level of a disturbance signal contained in the received signal; wherein the reference level of the signal is controlled based on the output from the detection circuit correspondingly to the level of the disturbance signal so that the level of the signal supplied from the level control circuit to the A/D converter circuit ranges within the dynamic range of the A/D converter circuit.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kurihara's power level calculating circuit and receiver in view of Takagi disclosure in order to detect the level of a disturbance signal contained in the received signal; wherein the reference level of the signal is controlled based on the output from the detection circuit correspondingly to the level of the disturbance signal so that the level of the signal supplied from the level control circuit to the A/D converter circuit ranges within the dynamic range of the A/D converter circuit.

- In regard claim 2, the limitation that if the wideband variance value is greater than the narrowband variance value, comparing the narrowband and wideband

variance values to determine a scale factor for the input to the variable gain amplifier can further be taught by Takagi in Fig.1 element 51 and column 5 line 60 – column 6 line 65.

- In regard claim 3, the limitation of down-converting the received digital signal, to produce a down converted signal; filtering the down-converted signal to produce a filtered received signal; determining the narrowband variance value from the filtered received signal can further be taught by Takagi in Fig.1 elements 21I and 21Q, elements 25I and 25Q, and element 51, and column 5 line 6 – column 6 line 58.
- In regard claim 4, the limitation of down-converted signal is a baseband signal can further be taught by Takagi in column 5 lines 6-21.
- In regard claim 5, the limitation of quadrature demodulating the down-converted signal, to produce an in phase (I) and quadrature (Q) signal used in determining the narrowband variance value can further be taught by Takagi in Fig.1 elements 21I and 21Q, and column 5 lines 6-21.
- In regard claim 6, the limitation of the wideband variance value is determined directly from the received digital signal can further be taught by Kurihara in Fig.1 element 10 and column 6 lines 1-67.
- In regard claim 9, which is an apparatus claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 10, which is an apparatus claim related to claim 6, all limitation is contained in claim 6. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 11, which is an apparatus claim related to claim 3, all limitation is contained in claim 3. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 12, which is an apparatus claim related to claim 4, all limitation is contained in claim 4. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 13, which is an apparatus claim related to claim 5, all limitation is contained in claim 5. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 14, the limitation of a comparator, for comparing the narrowband and wideband variance values to determine a scale factor for the input to the variable gain amplifier can further be taught by Takagi in Fig.1 element 51 and column 5 line 60 – column 6 line 65.

Conclusion

10. Reference US6,658,069 and US6,650,878 are cited because they are put pertinent to the receiver with AGC. However, none of references teach detailed connection as recited in claim.

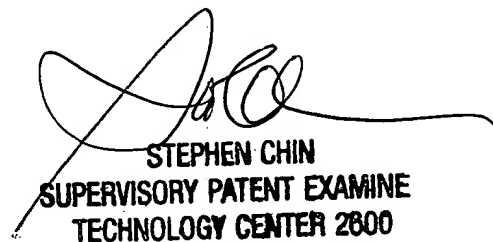
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (703) 305-0373. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Chin can be reached on (703) 305-4714. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang
Examiner
Art Unit 2634

Ted M. Wang



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